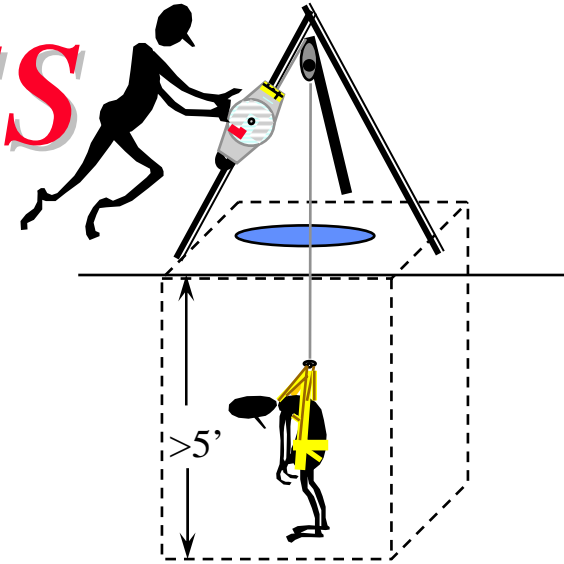


# ***CONFINED SPACES***

in

## SC B&CB Facilities



Revised as of: May 2006  
SC GSD Safety

# Pictorial Directory & Hazard Analysis of **CONFINED SPACES**

in SC B&CB Buildings

(in Alphabetical Order **F - Z** by Building Name / System)



**Gas Monitor  
REQUIRED  
To Take Continuous  
Atmospheric Readings  
For ALL  
Confined Spaces**

**Permit Required  
Confined Spaces**

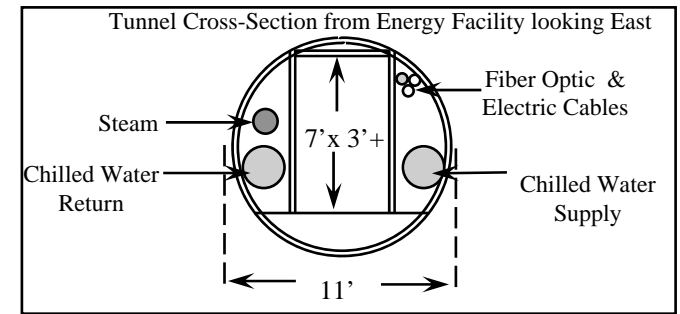
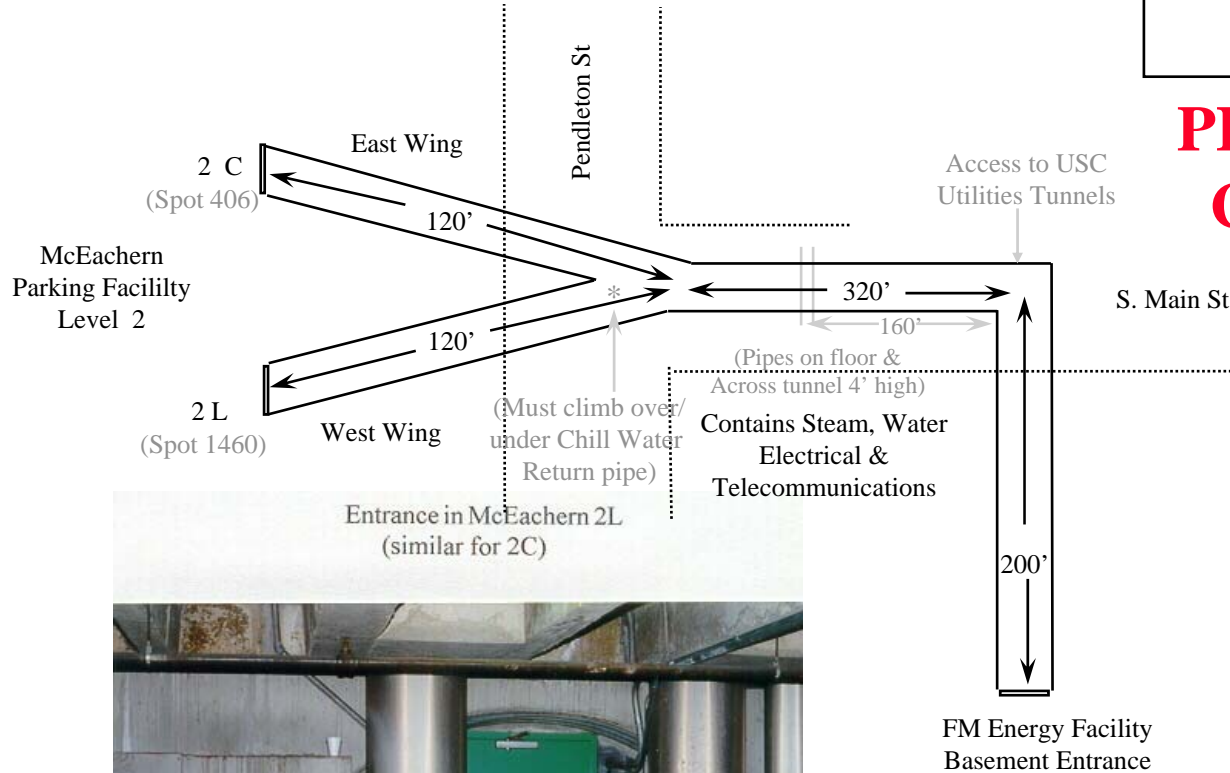
**REQUIRE  
ENTRY PERMIT  
From Your  
Supervisor**

**Questions: Call  
Bernie Lee, Safety  
737-2315**

# FM ENERGY FACILITY

Bldg 100410, 1121 College St

## TUNNEL to McEACHERN PARKING FACILITY



**PERMIT REQUIRED  
CONFINED SPACE**



# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

Tunnel between McEachern &  
State Complex Energy Facility

Title of Job/Operation \_\_\_\_\_ Date 6/96 & 9/27/96 No. \_\_\_\_\_

Position/Title(s) of Person(s) Who Do Job \_\_\_\_\_ Name of Employee Observed \_\_\_\_\_

Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Enter tunnel	E- Lack O <sub>2</sub> /gases	Take air samples prior to entry
	FS- Slip/Trip	Wear appropriate work shoes
2. Conduct work	E- Lack O <sub>2</sub> /gases	Take air samples during entry
	E- Electrical/Heat	Use LOTO prior to entry; take water & rest breaks A/R; wear appropriate PPE
	FS- Slip/Trip	Wear appropriate work shoes
	CW- Water/Steam	Use LOTO prior to entry; Hot Work Permit & Emergency evacuation procedures
	SA- Pipes (at "Y")	Install steps across pipe
3. Exiting	E, FS, CW, SA	(see above)
	CI- Doors locked from outside tunnel	Change locks so keys not needed for escape

Struck By (SB)  
Struck Against (SA)  
Contacted By (CB)  
Contact With (CW)

Caught On (CO)  
Caught In (CI)  
Caught Between (CBT)  
Fall to Same Level (FS)

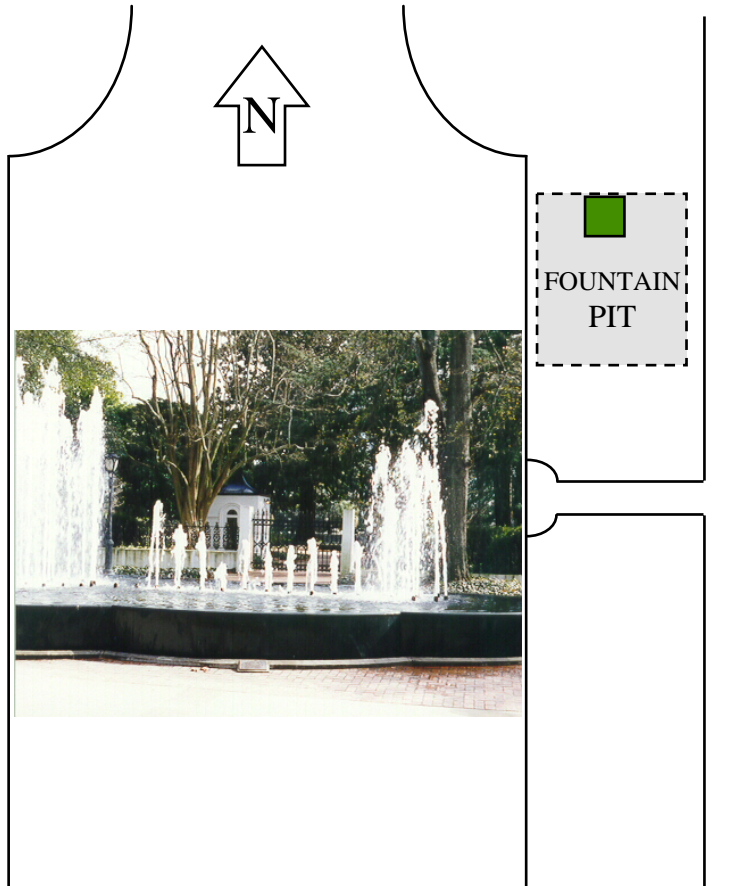
Fall to Below (FB)  
Overexertion (OE)  
Exposure (E)



# Governor's Mansion

Bldg 800038, 800 Richland St

## Fountain Pit

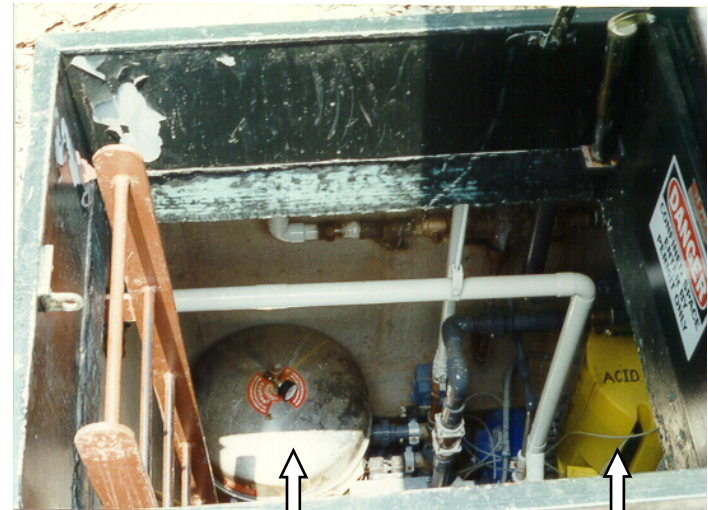


- FOUNTAIN SHOULD BE DRAINED EVERY 2 MONTHS; REQUIRES CUTOFF AT ABOVE GROUND VALVE BOX THEN DRAINING AND REFILLING POOL

- TREE LEAVES JAM FILTER IN THE FALL REQUIRING FILTER TO BE CLEANED OUT, SOMETIMES SEVERAL TIMES PER DAY

- ALL OTHER OPERATIONS ARE BY CONTRACTOR

## Non-Permit Confined Space



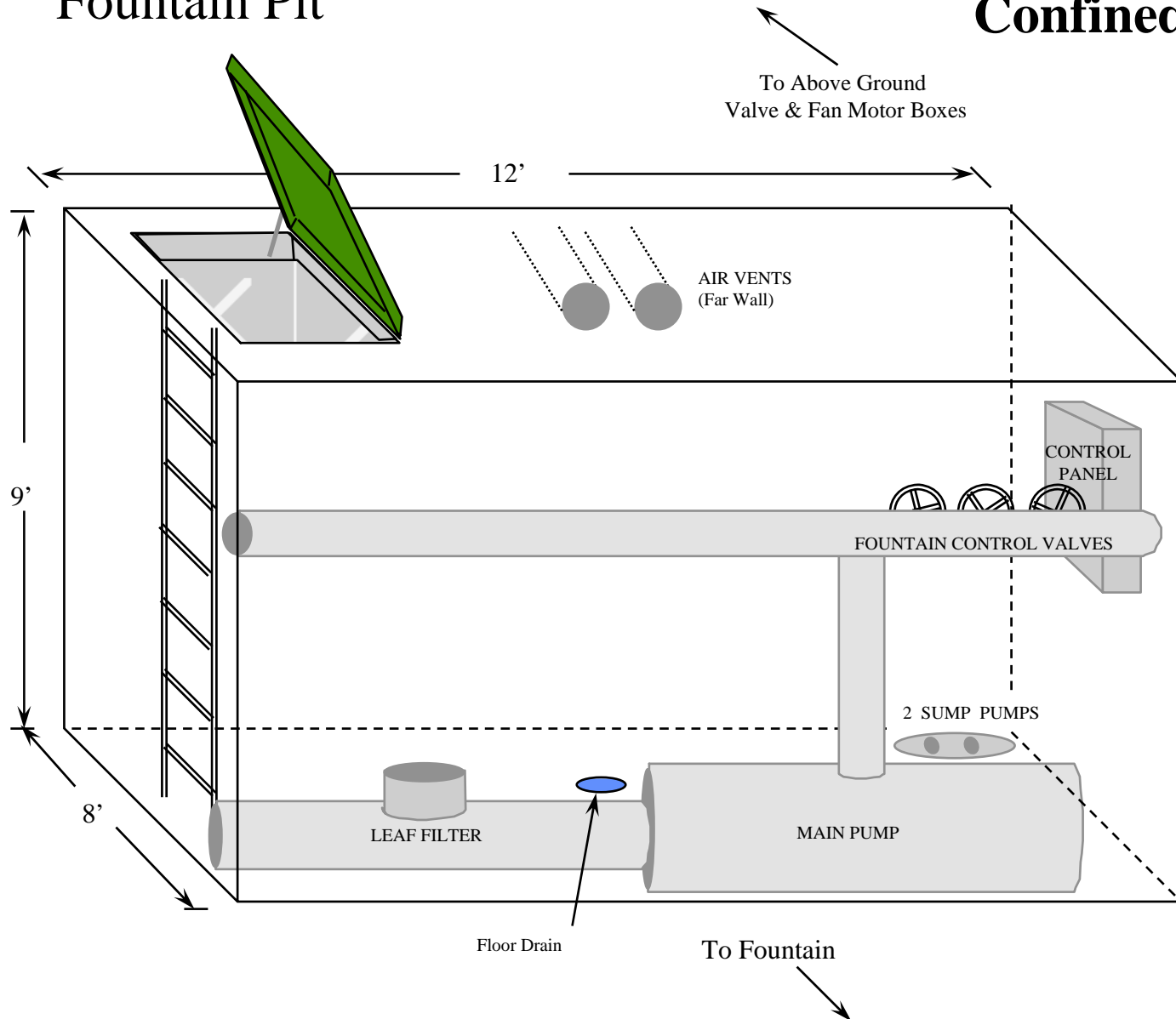
Note: Chemical Containers Removed 1998

# Governor's Mansion

Bldg 800038, 800 Richland St

## Fountain Pit

## Non-Permit Confined Space



# Job Safety Analysis Worksheet

Underground Fountain Pit  
 Title of Job/Operation at the Governor's Mansion Date 7/95 & 11/1/96 No.         
 Position/Title(s) of Person(s) Who Do Job Mike Lee/Tom Knowles Name of Employee Observed         
 Department Horticulture Analysis Made By Bernie Lee  
 Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Prepare to Enter	OE- Lifting Hatch Lid	Lifting Mechanism installed
2. Enter Pit	FB- 9'	Fixed ladder: use proper climbing technique
	E- <del>Gases/Lack of O<sub>2</sub></del>	<del>Take air samples prior to entry</del>
	SB- Hatch Lid	Lift Mechanism has lock for open position
3. Conduct Work	SA- Equipment & Pipes	Be aware of location
	FS- Slip/Trip	Wear appropriate safety soled shoes
	CW- <del>Caustic Soda, Acid, Water</del>	Use LOTO, <del>Wear PPE</del> , Sump Pump installed
	E- <del>Gases/Lack of O<sub>2</sub></del>	<del>Take air samples during entry</del>
4. Exit	(Same as # 1 & # 2)	(Same as # 1 & # 2)

CHEMICAL CONTAINERS REMOVED 1998

Struck By (SB)  
 Struck Against (SA)  
 Contacted By (CB)  
 Contact With (CW)

Caught On (CO)  
 Caught In (CI)  
 Caught Between (CBT)  
 Fall to Same Level (FS)

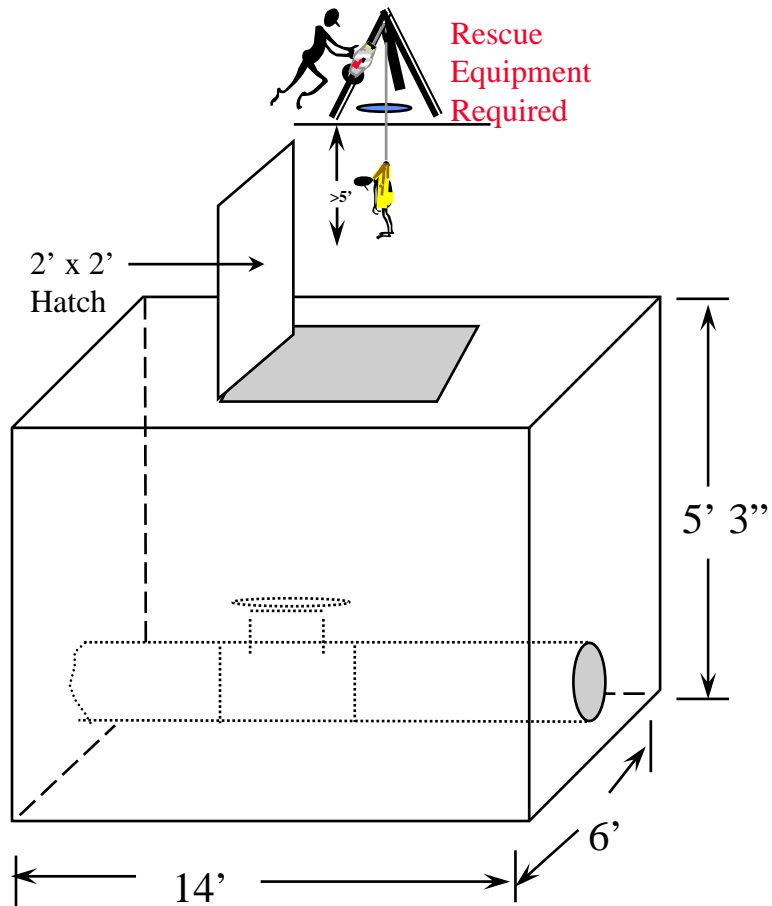
Fall to Below (FB)  
 Overexertion (OE)  
 Exposure (E)

# GRESSETTE-COLLINS

(SC RETIREMENT)

Bldg 110713, 202 Arbor Lake Drive  
BACKFLOW PREVENTER PIT

**PERMIT REQUIRED**  
**CONFINED SPACE**



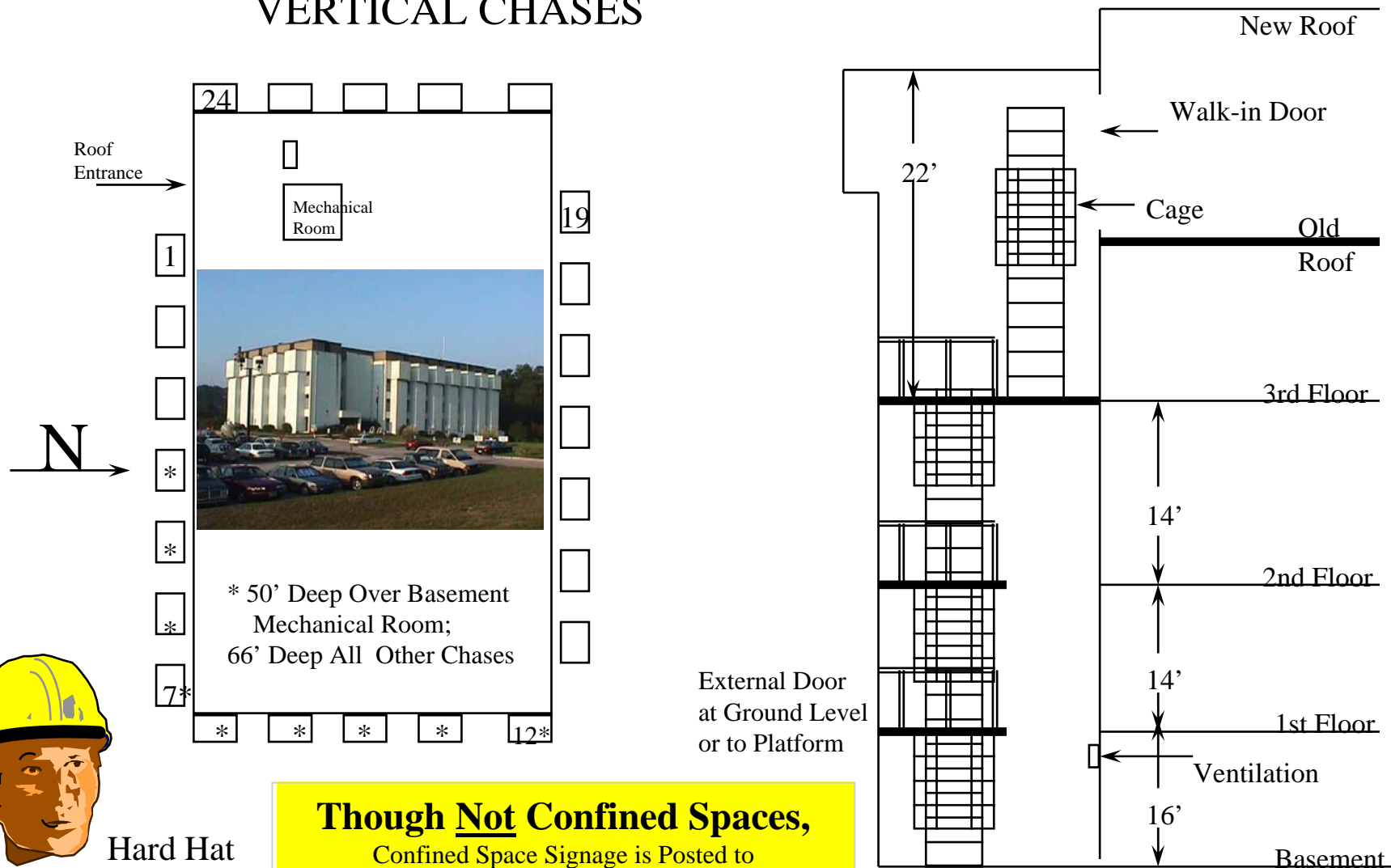
Located at Building's Northeast corner



# HAYNE LABORATORY BLDG (DHEC)

Bldg 100414, 8231 Parklane Rd

## VERTICAL CHASES



Hard Hat  
Recommended

**Though Not Confined Spaces,**

Confined Space Signage is Posted to

**Require Use of Multi-Gas  
Monitor (due to gas lines)**

# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

Title of Job/Operation Hayne Bldg- Vertical Chases (24) Date 7/94, 7/95, 3/96, 6/98 & 6/03 No.         

Position/Title(s) of Person(s) Who Do Job                                  Name of Employee Observed                                 

   Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Prepare to enter	FB- Climb over ventilation ducts	Provide stairs/cross-overs when able
	FS- Slip/Trip on gravel & equipment	Use caution
	SA- HVAC ducts w/ sharp corners	Use caution
2. Enter chase	E- Water, gas, electrical	Use LOTO prior to entry; use observer, air sampling, constant communication, i.e.
		Alternate Confined Space Procedures
3. Conduct work	FB- Reach for valves/controls	Guardrails on platforms at each level
	SB- Falling objects	Wear hard hat
	SA- Pipes/Equipment	Light installed at every level
	FB- Work not at platform	Use fall restraint/ladder
	E- Water, gas, electrical	Use LOTO; continuous air sampling
4. Exiting	(All of above)	(All of above)

Struck By (SB)  
Struck Against (SA)  
Contacted By (CB)  
Contact With (CW)

Caught On (CO)  
Caught In (CI)  
Caught Between (CBT)  
Fall to Same Level (FS)

Fall to Below (FB)  
Overexertion (OE)  
Exposure (E)

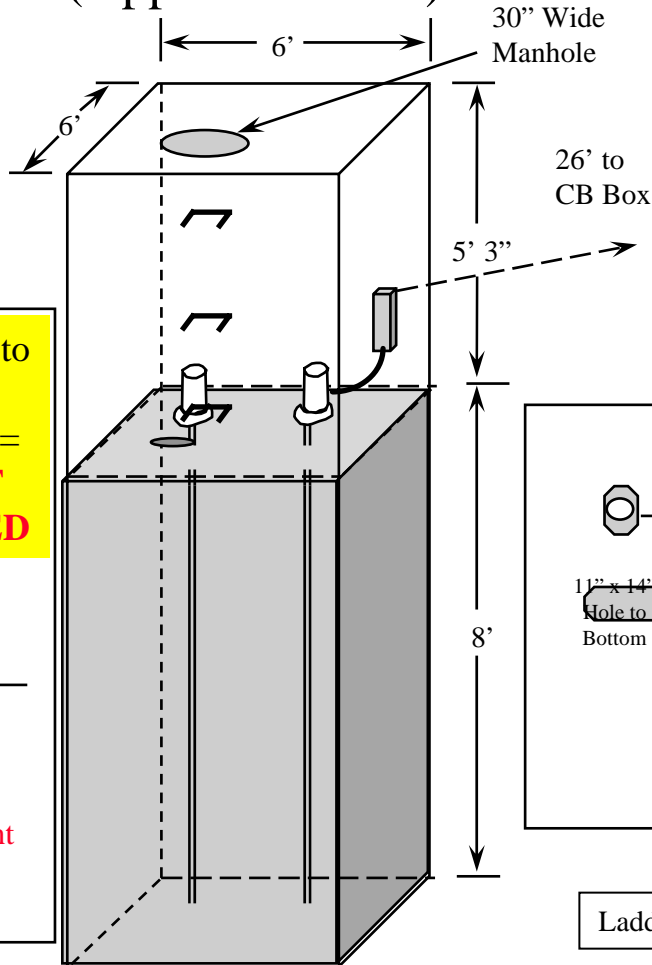
# McEachern Parking Facility

Bldg 100289, 1201 Pendleton St

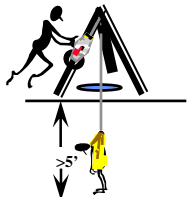
Sump Pump at 3D/E/F (Parking Spot 1032)

## NON-PERMIT CONFINED SPACE

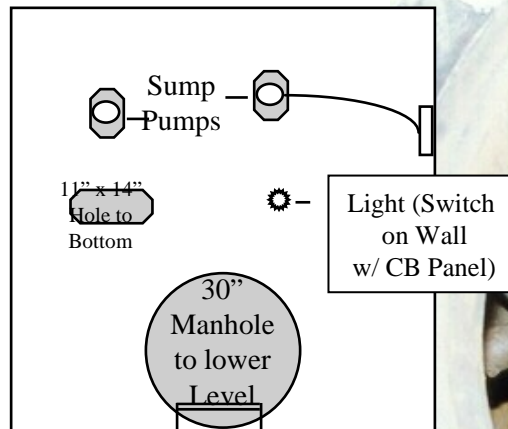
(Upper Chamber)



All Entries to  
Bottom  
Chamber =  
**PERMIT  
REQUIRED**



Rescue  
Equipment  
Required



Ladder = 3 Fixed Rungs



# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

Title of Job/Operation McEachern Sump Pump 3L Date 10/14/96 No.         

Position/Title(s) of Person(s) Who Do Job                                  Name of Employee Observed                                 

   Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Prepare to Enter	SB- Vehicle traffic	Cordon off Manhole w/ vehicle/cones
	OE- Lifting Manhole cover	<50 Lbs; use lever/proper lifting techniques
2. Enter manhole	FB- 5' 3"	Fixed ladder installed: use proper climbing
	E- Gases/Lack of O <sub>2</sub>	Take air samples prior to entry
3. Conduct Work	E- Gases/Lack of O <sub>2</sub>	Take continuous air samples during entry
	CB- Flood waters	Exit if pump can not handle volume
	CW- Electrical	Use LOTO (CB box on wall) prior to entry
	FS- Slip/Trip (water, pipes, equipment)	Wear work boots & be aware of equipment
	SA- Pipes/equipment	Be aware of location
4. Exiting	FB	Fixed ladder installed; use proper climbing
5. Close Up	FB/SB	Close cover; keep feet/hands away
	OE- Lifting pit cover(s)	<50 Lbs; use lever/proper lifting techniques

Struck By (SB)  
Struck Against (SA)  
Contacted By (CB)  
Contact With (CW)

Caught On (CO)  
Caught In (CI)  
Caught Between (CBT)  
Fall to Same Level (FS)

Fall to Below (FB)  
Overexertion (OE)  
Exposure (E)

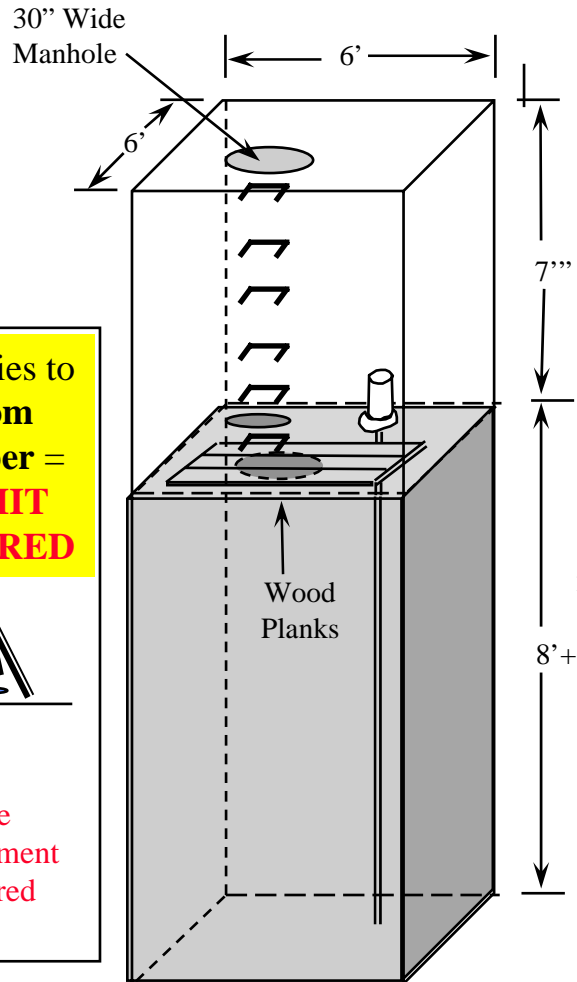


# McEachern Parking Facility

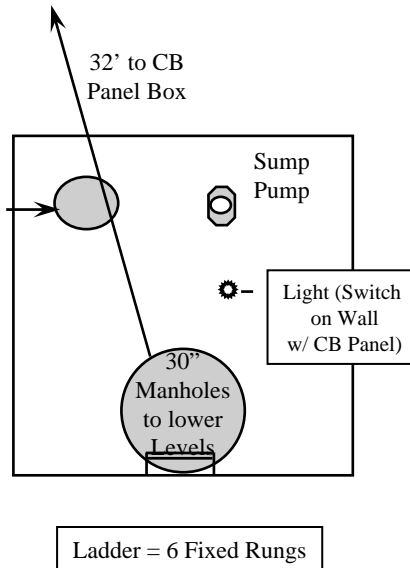
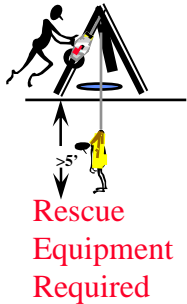
Bldg 100289, 1201 Pendleton St

Sump Pump at 3L (Parking Spots 1668 & 1704)

## NON-PERMIT CONFINED SPACE (Upper Chamber)



All Entries to  
Bottom  
Chamber =  
**PERMIT  
REQUIRED**



Lockout-Tagout

# CONFINED SPACES SURVEY Job Safety Analysis Worksheet

Title of Job/Operation McEachern Sump Pump 3D/E/F Date 10/14/96 No.           

Position/Title(s) of Person(s) Who Do Job \_\_\_\_\_ Name of Employee Observed \_\_\_\_\_

Analysis Made By Bernie Lee

Department Building SystemsSection Facilities ManagementAnalysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Prepare to Enter	SB- Vehicle traffic	Cordon off Manhole w/ vehicle/cones
	OE- Lifting Manhole cover	<50 Lbs; use lever/proper lifting techniques
2. Enter manhole	FB- 7'	Fixed ladder installed; use proper climbing
	E- Gases/Lack of O <sub>2</sub>	Take air samples prior to entry
3. Conduct Work	E- Gases/Lack of O <sub>2</sub>	Take continuous air samples during entry
	CB- Flood waters	Exit if pump can not handle volume
	CW- Electrical	Use LOTO (CB box on wall) prior to entry
	FS- Slip/Trip (water, pipes, equipment)	Wear work boots & be aware of equipment
	SA- Pipes/equipment	Be aware of location
4. Exiting	FB	Fixed ladder installed; use proper climbing
5. Close Up	FB/SB	Close cover; keep feet/hands away
	OE- Lifting pit cover(s)	<50 Lbs; use lever/proper lifting techniques

Struck By (SB)

Struck Against (SA)

Contacted By (CB)

Contact With (CW)

Caught On (CO)

### Caught In (CI)

### Caught Between (CBT)

### Fall to Same Level (FS)

### Fall to Below (FB)

Overexertion (OE)

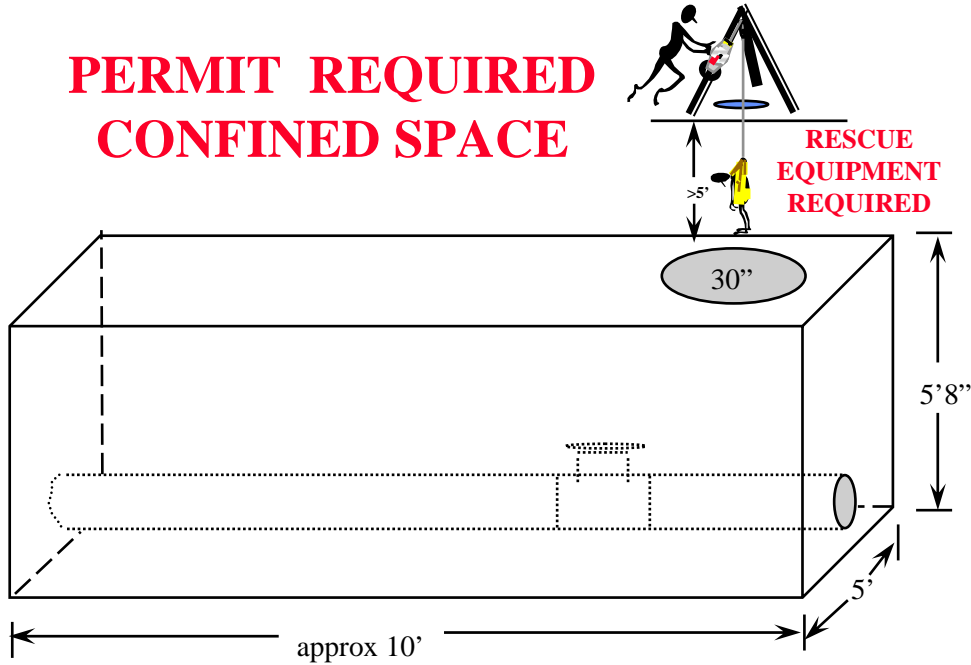
Exposure (E)

# MILLS-JARRETT

Bldg 110707, 2100 Bull St

## BACKFLOW PREVENTER PIT

**PERMIT REQUIRED  
CONFINED SPACE**



At Southwest corner of Jarrett Bldg  
Parking Lot next to Calhoun St. fence

# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

Title of Job/Operation Mills-Jarrett Backflow Pit Date 3/96 & 9/30/96 No.         

Position/Title(s) of Person(s) Who Do Job                                  Name of Employee Observed                                 

   Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Prepare to Enter	OE- Lifting Manhole cover	<50 Lbs; use lever/proper lifting techniques
2. Enter manhole	FB- 5' 8"	Need ladder; use proper climbing techniques
	E- Lack of O <sub>2</sub>	Take air samples prior to entry
3. Conduct Work	E- Lack of O <sub>2</sub>	Take continuous air samples during entry
	CW- Flood waters	Use LOTO prior to entry
	FS- Slip/Trip (water, pipes)	Wear work boots & be aware of pipes
	SA- Pipes /low ceiling	Be aware of location; portable lighting
4. Exiting	FB	Fixed ladder installed; use proper climbing
5. Close Up	FB/SB	Close cover; keep feet/hands away
	OE- Lifting pit cover(s)	<50 Lbs; use proper lifting techniques

Struck By (SB)

Struck Against (SA)

Contacted By (CB)

Contact With (CW)

Caught On (CO)

Caught In (CI)

Caught Between (CBT)

Fall to Same Level (FS)

Fall to Below (FB)

Overexertion (OE)

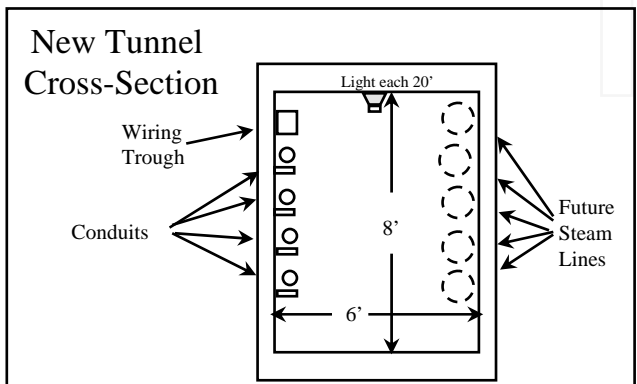
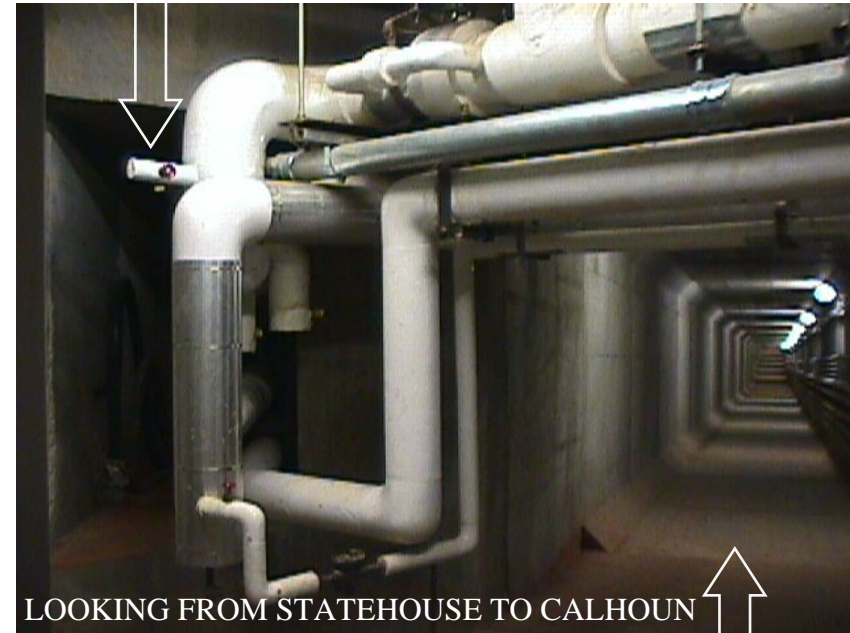
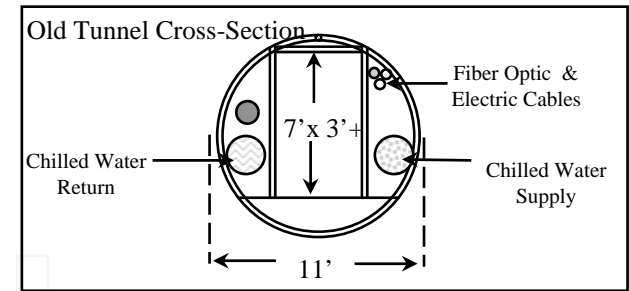
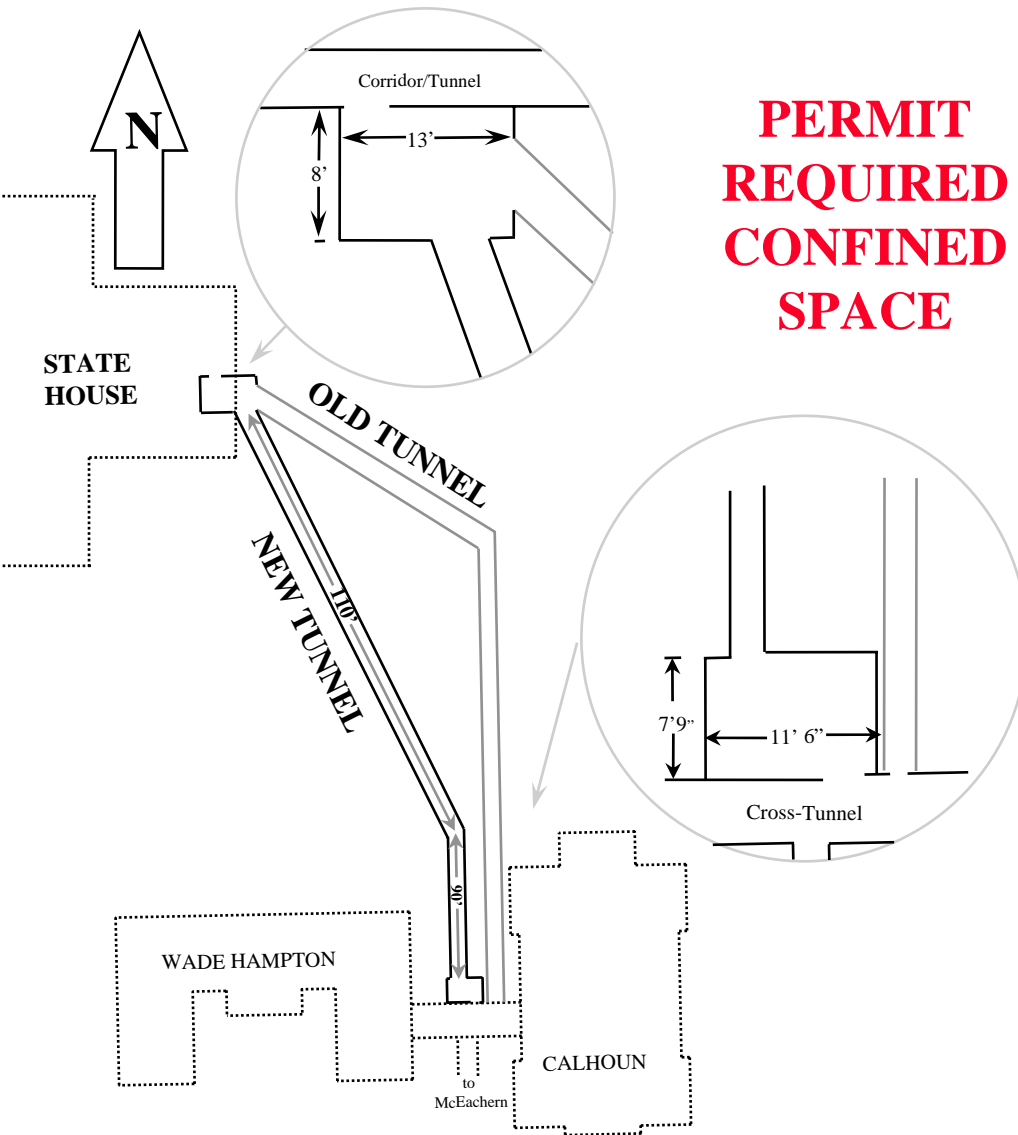
Exposure (E)



# STATEHOUSE BLDG

Bldg 107892, 1100 Gervais St

## TUNNELS TO WADE HAMPTON BLDG



# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

Tunnel between Calhoun/Hampton

Title of Job/Operation \_\_\_\_\_ Bldg. & State House Date 6/98 No. \_\_\_\_\_

Position/Title(s) of Person(s) Who Do Job \_\_\_\_\_ Name of Employee Observed \_\_\_\_\_

Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by \_\_\_\_\_

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Enter tunnel	E- Lack O <sub>2</sub> /gases	Take air samples prior to entry
	FS- Slip/Trip	Wear appropriate work shoes
2. Conduct work	E- Lack O <sub>2</sub> /gases	Take air samples during entry
	E- Electrical/Heat	Use LOTO prior to entry; take water & rest breaks A/R; wear appropriate PPE
	FS- Slip/Trip	Wear appropriate work shoes
	CW- Water/Steam	Use LOTO prior to entry; Hot Work Permit & Emergency evacuation procedures
	SA- Pipes (at "Y")	Install steps across pipe
3. Exiting	E, FS, CW, SA	(see above)
	CI- Doors locked from outside tunnel	Have locks not need keys for escape

Struck By (SB)

Struck Against (SA)

Contacted By (CB)

Contact With (CW)

Caught On (CO)

Caught In (CI)

Caught Between (CBT)

Fall to Same Level (FS)

Fall to Below (FB)

Overexertion (OE)

Exposure (E)

# STATEHOUSE BLDG

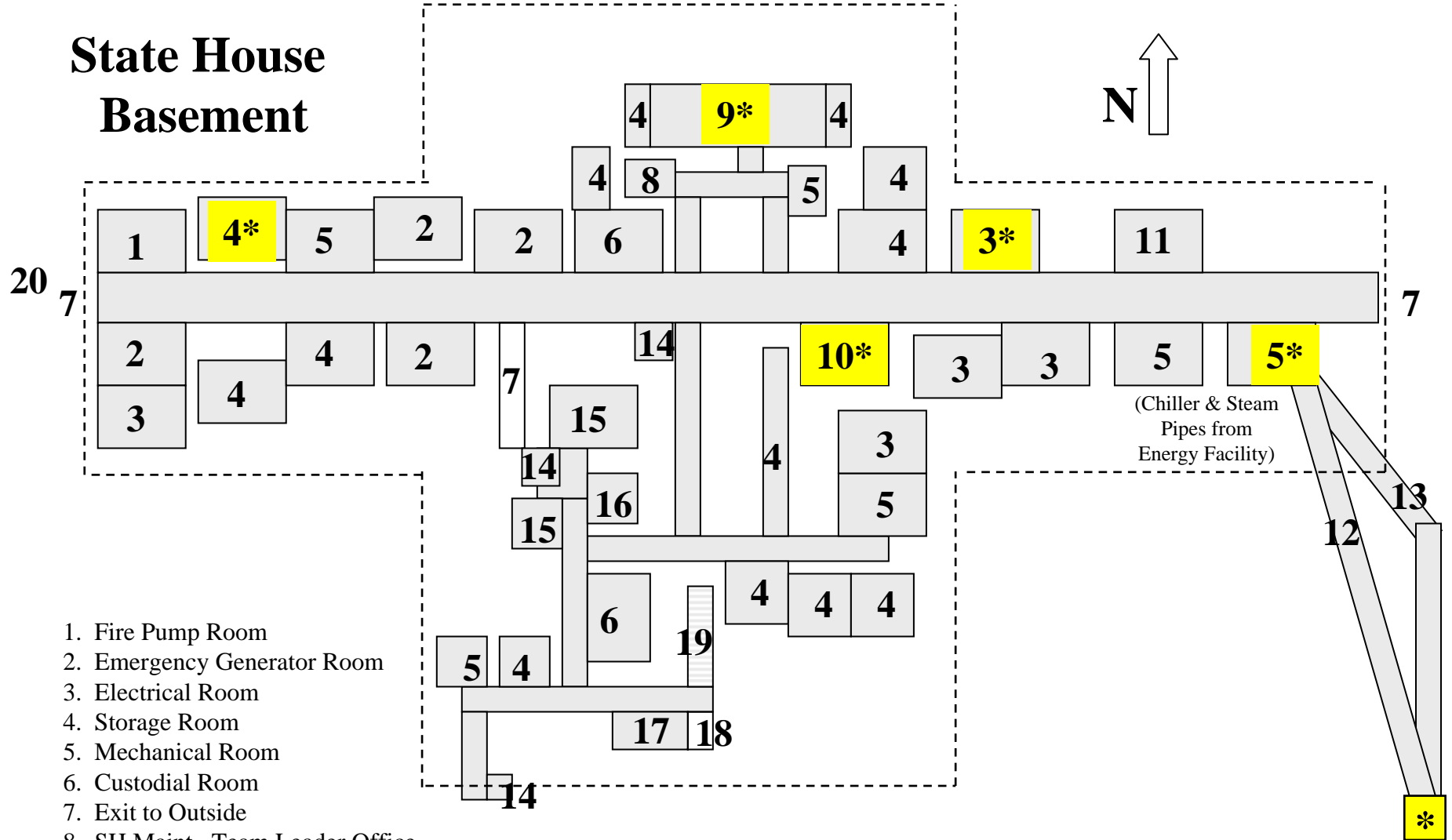
Bldg 107892, 1100 Gervais St  
UTILITY SPACE



**Underneath the entire State House is a utility space. There is an entrance in the central basement and each of the wings. The space is as high as 6' but other areas require crawling under/over ducts, conduit and pipes.**



# State House Basement



1. Fire Pump Room
  2. Emergency Generator Room
  3. Electrical Room
  4. Storage Room
  5. Mechanical Room
  6. Custodial Room
  7. Exit to Outside
  8. SH Maint., Team Leader Office
  9. SH Maint. Team Office & Storage
  10. Building Shock Absorber Display
  11. Communications Room
  12. New Energy Tunnel
  13. Old Energy Tunnel
  14. Elevator
  15. Elevator Mechanical Room
  16. Toilet
  17. Security
  18. Exit to McEachern Parking Facility
  19. Escalator
  20. Underground Storage Tank (for Generator)
- \* - Confined Space Entrance**



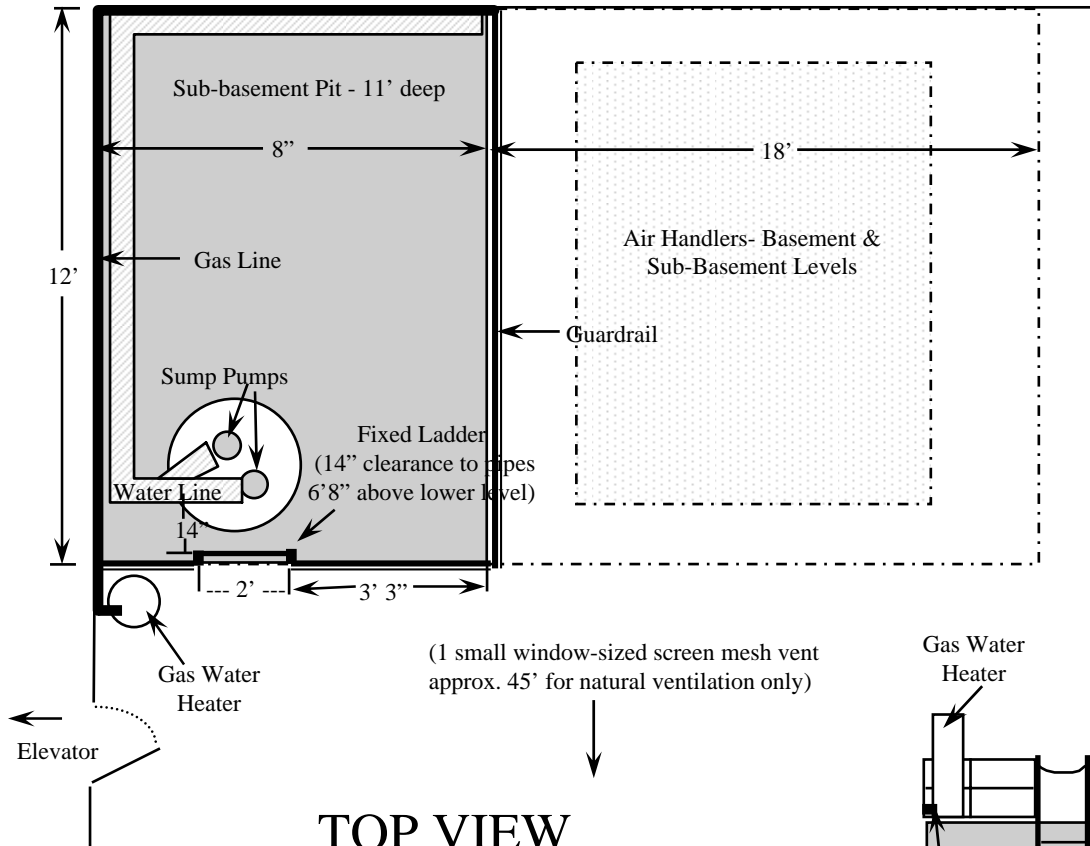
# STATE LIBRARY BLDG

Bldg 100412, 1500 Senate St

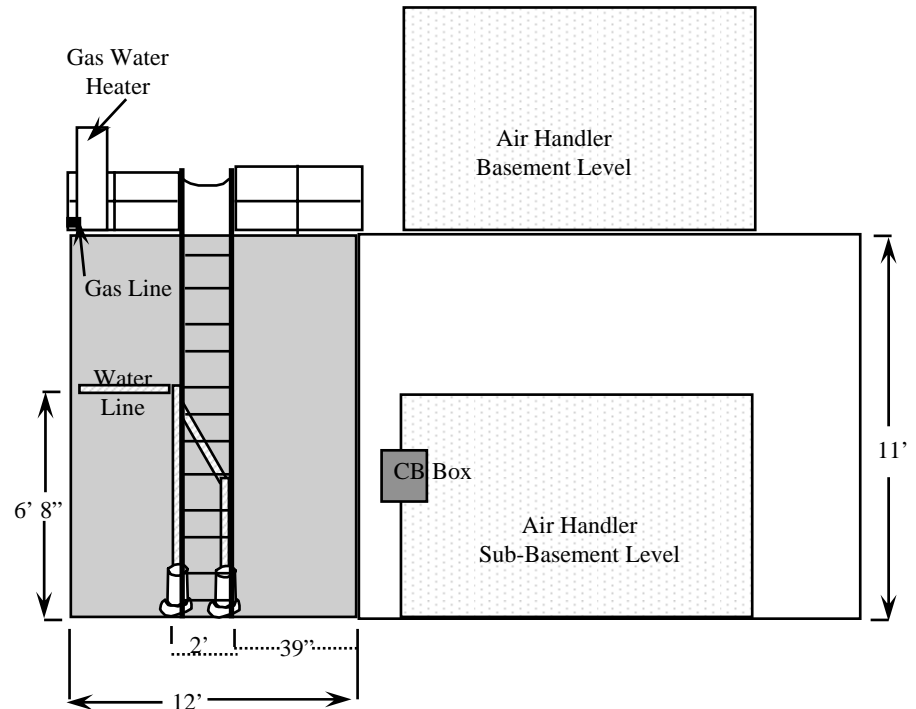
## MECHANICAL ROOM

### (BASEMENT) PIT

## Non-Permit Confined Space



## SIDE VIEW



# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

State Library Mechanical Room

Title of Job/Operation (Basement) Pit Date 1/96 & 9/26/96 No.       

Position/Title(s) of Person(s) Who Do Job        Name of Employee Observed       

       Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Enter pit	FB- 11'	Fixed ladder installed; use proper climbing
	E- Natural Gas/Lack of O <sub>2</sub>	Take air samples prior to entry
	SA- Pipes	Relocate ladder to corner
2. Conduct Work	E- Natural Gas/Lack of O <sub>2</sub>	Take continuous air samples during entry
	CW- Flood waters	Exit if pump can not handle volume
	CW- Electrical	Use LOTO (CB box on wall)
	FS- Slip/Trip (water, pipes, equipment)	Wear work boots & be aware of equipment
	SA- Pipes/equipment	Be aware of location
3.	FB	Fixed ladder installed; use proper climbing
Exiting		techniques; reinstall guardrail chain

Struck By (SB)

Struck Against (SA)

Contacted By (CB)

Contact With (CW)

Caught On (CO)

Caught In (CI)

Caught Between (CBT)

Fall to Same Level (FS)

Fall to Below (FB)

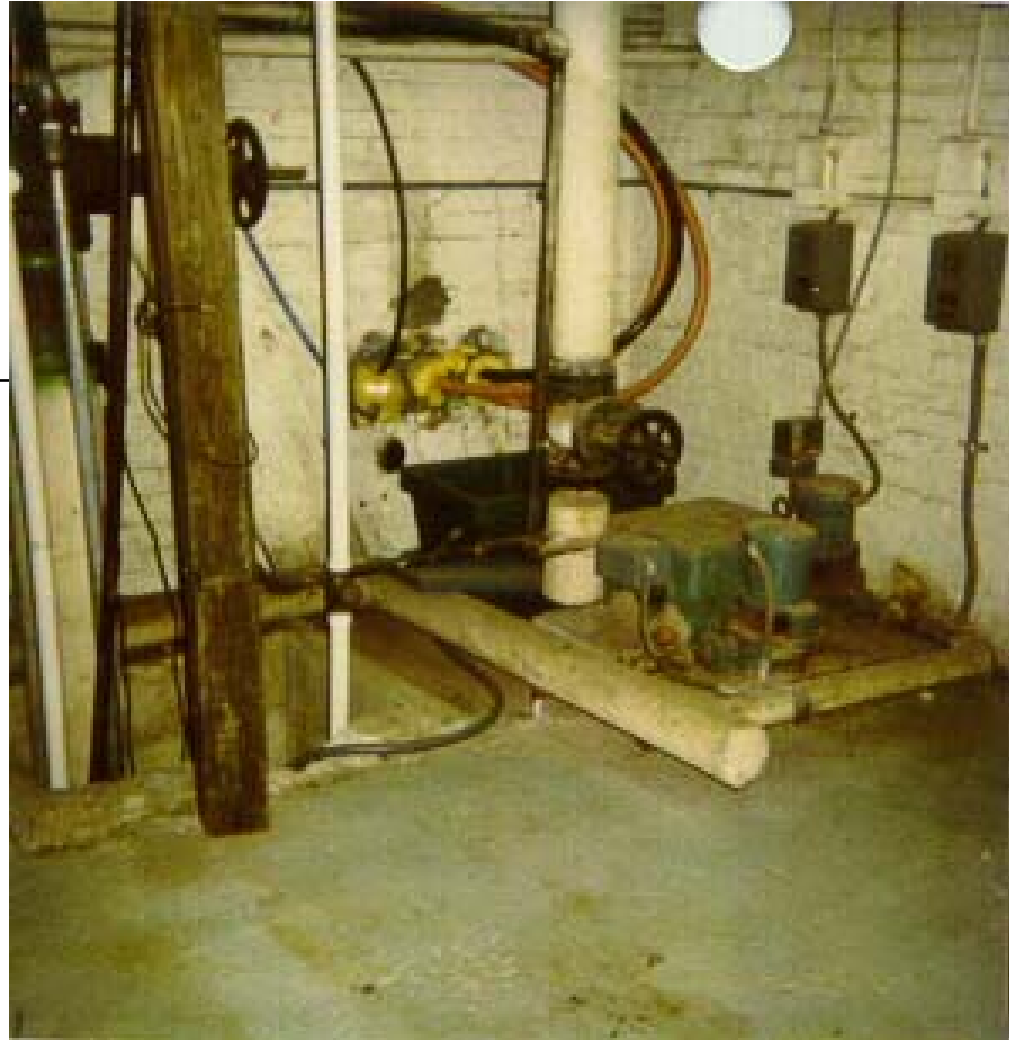
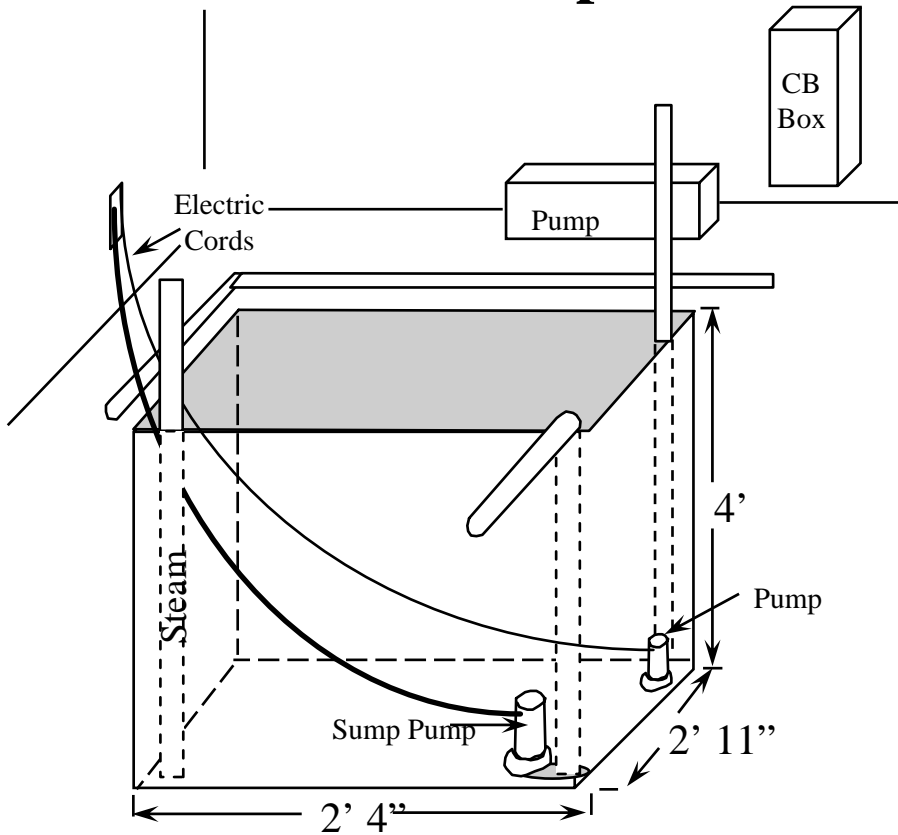
Overexertion (OE)

Exposure (E)

# SUMTER ST BLDG

Bldg, 104178, 1026 Sumter St  
(BASEMENT) PIT

## Non-Permit Confined Space



# CONFINED SPACES SURVEY

## Job Safety Analysis Worksheet

Title of Job/Operation 1026 Sumter St (Basement) Pit Date 10/11/96 No.         

Position/Title(s) of Person(s) Who Do Job                                  Name of Employee Observed                                 

   Analysis Made By Bernie Lee

Department Building Systems

Section Facilities Management Analysis Approved by Confined Space Committee

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Enter	FB- 4'	Need a ladder
2. Conduct Work	CW- Hot Water/Steam/Electricity	LOTO: PPE (gloves, long sleeves/apron)
	SA- Pipes	Be aware of location
3. Exiting	FB	Need a ladder

Struck By (SB)

Struck Against (SA)

Contacted By (CB)

Contact With (CW)

Caught On (CO)

Caught In (CI)

Caught Between (CBT)

Fall to Same Level (FS)

Fall to Below (FB)

Overexertion (OE)

Exposure (E)

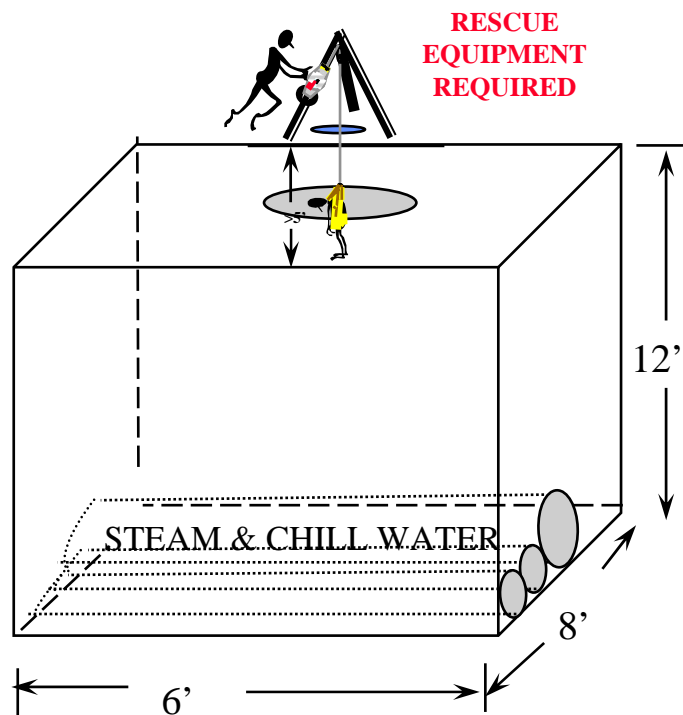


# SUPREME COURT

Bldg 100393, 1231 Gervais St

BACKFLOW PREVENTER PIT

**PERMIT REQUIRED**  
**CONFINED SPACE**

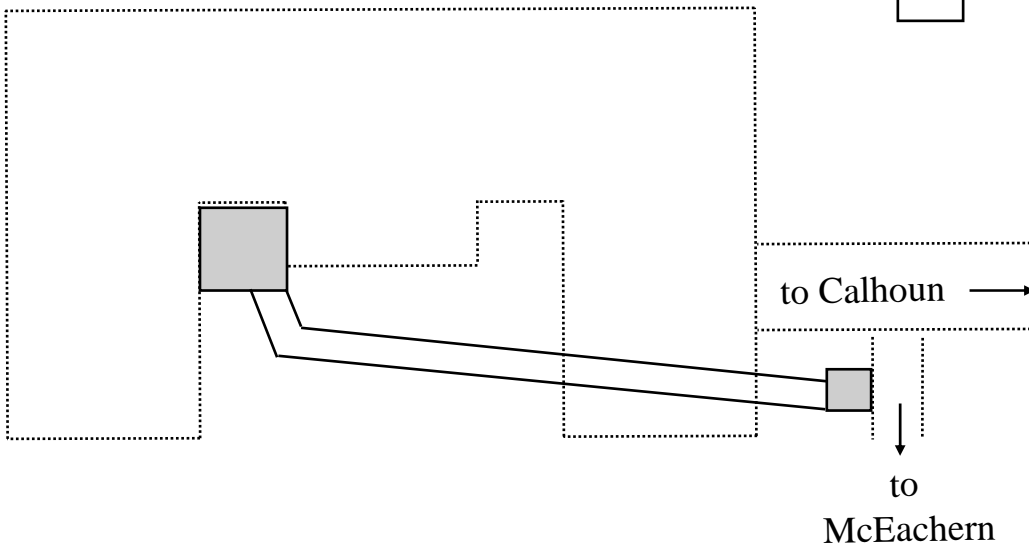


Located on Southwest corner in driveway

# WADE HAMPTON BLDG

Bldg 100300, 1200 Senate St  
TUNNEL

**PERMIT REQUIRED  
CONFINED SPACE**



Steam, Electrical,  
Telecommunications

Located Between the Basement's  
West Mechanical Room and the  
Parking Garage Connector Corridor

